

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6a-1 (Permit Section V.G.6.a)

**BMP Title:** **MUNICIPAL OPERATIONS & MAINTENANCE PROGRAM**

**Target Audience:** City Departments

### BMP Description:

A long term operation and maintenance program is necessary to minimize the discharge of pollutants from our MS4 outfalls. Since the operation and maintenance program reaches across multiple departments, it was determined that there needed to be a clear line of authority and responsibility for compliance with this SWPPP. Components in this SWPPP relating to operation and maintenance will be reported to one central contact person that will oversee progress and offer assistance as needed.

More specific details regarding each BMP can be found on the following BMP Sheets:

- Street Sweeping - BMP 6a-2.
- Maintenance of the storm drain system (pipes, catch basins, manholes, outfalls) – BMP 6b-2.
- Maintenance of the detention ponds, infiltration basins, etc – BMP 6b-3, BMP 6b-4.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

### Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks listed in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of operation and maintenance procedures reported to the SWPPP Coordinator listed below.

### Timeline/Implementation Schedule:

Baseline- The City does not have a central contact for recording all of the operation and maintenance operations.  
2007- Touch base with the responsible parties that are responsible for the above referenced BMP sheets on a quarterly basis Create a database of publicly-owned BMPs as described above.  
2008-2011 Annually review policies and procedures and amend if necessary.

### Specific Components and Notes:

Resources Needed:

- Staff time to oversee BMP.

### Responsible Party for this BMP:

Name: Emily Javens, PE, CPESC

Department: Engineering

Phone: (507) 387-8643

E-mail: [stormwater@city.mankato.mn.us](mailto:stormwater@city.mankato.mn.us)

### Recordkeeping & Reporting:

# of reported O&M procedures (OM)

2008: OM = \_\_\_\_\_ 2009: OM = \_\_\_\_\_

2010: OM = \_\_\_\_\_ 2011: OM = \_\_\_\_\_

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6a-2 (Permit Section V.G.6.a)

**BMP Title:** **STREET SWEEPING**

### BMP Description:

The City of Mankato's Street Sweeping Program's objective is to remove sediment, leaves, litter, and other debris from the City's streets to improve the efficiency of the storm water collection system and to enhance the appearance of the public roadway. The City owns and operates 2 mechanical broom sweepers, an *Elgin Pelican*, and an *Elgin Eagle*, the city also owns an *Elgin Whirlwind* vacuum sweeper.

The City of Mankato's street maintenance staff targets the completion of three full sweep cycles. The annual sweeping cycle usually begins in the spring. A full-city sweep is conducted to remove sediment and litter that have accumulated over the winter. Sweeping continues throughout the summer primarily to collect litter on an area by area rotation, but also is targeted in response to complaints and known chronic problem areas, such as certain industrial areas and in areas that serve as sediment and debris collection points.(e.g., the bottoms of hills). Due to the variety of tree species and density of trees, fall sweeping (leaf pick-up) necessitates multiple cycles in multiple areas to collect leaves. When temperatures permit, sand is swept from streets during the winter months.

Additionally, the Maintenance staff sweeps the central business district once per week (when temperatures are above freezing) due to the intensity of traffic (and braking) and concentrated pedestrian use. Finally, sweepers are used during the grind/mill/overlay process of road rehabilitation. After the grinding and milling phases are completed, the area is swept first by the mechanical sweeper and second by the vacuum sweeper to collect the residual coarse and fine material.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

### Measurable Goals:

1) Number of tons of material removed each year.

### Timeline/Implementation Schedule:

1) 2007-2011 Continue current system of street sweeping which includes training, storage, disposal and scheduling of sweeping.

2) 2007-2011 Continue to evaluate street sweeping research and equipment upgrades as information becomes readily available.

### Specific Components and Notes:

1) Materials collected from street sweeping operations are stockpiled on site until a sufficient amount has collected for transport to the Blue Earth County Landfill where it is used as daily cover material.

2) Materials recovered from the milling operations are recycled as screened aggregate or used in RAP asphalt mix designs.

3) Leaves are recycled and used in Mankato's parks or transported to a compost site.

4) Street Division Annual Report "Street Cleaning Program"

### Responsible Party for this BMP:

Name: Charles Thomas  
Department: Public Works – Street Division  
Phone: (507)387-8689  
E-mail: cthomas@city.mankato.mn.us

### Recordkeeping & Reporting:

# of tons of material removed (TMR)

2007: TMR = \_\_\_\_\_ 2008: TMR = \_\_\_\_\_

2009: TMR = \_\_\_\_\_ 2010: TMR = \_\_\_\_\_

2010: TMR = \_\_\_\_\_

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6b-2 (Permit Section V.G.6.b.2)

**BMP Title:** **ANNUAL INSPECTION OF ALL STRUCTURAL POLLUTION CONTROL DEVICES**

**Target Audience:** City Departments

**BMP Description:**

The City has relatively few structural pollution control devices and inspects all of them annually. The City will annually update the inventory and add any new structures to the inspection schedule. Work orders will be recorded for any maintenance that needs to be done on the inspected structures.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

**Measurable Goals:**

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of annual inspections performed.
- # of work orders processed.

**Timeline/Implementation Schedule:**

2007-11 Maintain annual inspections.

2007-11 Update inventory annually.

**Specific Components and Notes:**

Resources Needed: Staff time to inspect and maintain structures.

Note: May want to consider using digital photography to document structure conditions.

**Responsible Party for this BMP:**

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Department: Engineering

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E-mail: [stormwater@city.mankato.mn.us](mailto:stormwater@city.mankato.mn.us)

**Recordkeeping & Reporting:**

# of annual inspections (AI)

# of work orders (WO)

2007: AI = \_\_\_\_\_ WO = \_\_\_\_\_

2008: AI = \_\_\_\_\_ WO = \_\_\_\_\_

2009: AI = \_\_\_\_\_ WO = \_\_\_\_\_

2010: AI = \_\_\_\_\_ WO = \_\_\_\_\_

2011: AI = \_\_\_\_\_ WO = \_\_\_\_\_

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6b-3 (Permit Section V.G.6.b.3)

**BMP Title:** **INSPECTION OF A MINIMUM OF 20 PERCENT OF THE MS4 OUTFALLS, SEDIMENT BASINS AND PONDS EACH YEAR ON A ROTATING BASIS**

### BMP Description:

- Inspect 20% of all outfalls.
- Initiate appropriate maintenance.
- All inspections include digital photographs to be included in the database.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

### Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule.

The City of Mankato will be able to quantify the work done on this BMP by:

- # of outfalls inspected each year
- # of sediment basins and ponds inspected each year
- # of work orders processed each year for outfalls and sediment basins

### Timeline/Implementation Schedule:

2007 Identify locations of all outfalls requiring inspection & develop a schedule  
2008-11 Conduct the inspections and initiate work order process

### Specific Components and Notes:

Resources Needed: Staff time to annually inspect and maintain outfalls and basins and update inventory.

#### **Recordkeeping & Reporting:**

# of outfall inspections (OF)

# of sediment basin inspections (SB)

# of work orders (WO)

### Responsible Party for this BMP:

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2007: OF =	SB =	WO =
2008: OF =	SB =	WO =
2009: OF =	SB =	WO =
2010: OF =	SB =	WO =
2011: OF =	SB =	WO =

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6b-4 (Permit Section V.G.6.b.4)

**BMP Title:** **ANNUAL INSPECTION OF ALL EXPOSED STOCKPILE, STORAGE AND MATERIAL HANDLING AREAS**

**BMP Description:**

Every department is required to inspect all exposed stockpile, storage and material handling areas at least annually. During the first year of the permit, the MS4 Coordinator will inventory the inspections that will be required by each department. Each department head will be notified that the inspection results must be reported to the MS4 Coordinator on an annual basis.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

**Measurable Goals:**

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of stockpile and storage and handling area inspections

**Timeline/Implementation Schedule:**

2007 Inventory stockpiles and storage and material handling areas.

2007-2011 Conduct inspections, update inventory, and collect inspection reports.

**Specific Components and Notes:**

Resources Needed: Staff time to perform inspections.

Staff time to oversee progress of multiple departments.

**Responsible Party for this BMP:**

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Department: Engineering

Phone: (507) 387-8643

E-mail: [stormwater@city.mankato.mn.us](mailto:stormwater@city.mankato.mn.us)

**Recordkeeping & Reporting:**

# of inspections (I)

2007: SI = \_\_\_\_\_ 2008: SI = \_\_\_\_\_

2009: SI = \_\_\_\_\_ 2010: SI = \_\_\_\_\_

2011: SI = \_\_\_\_\_

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6b-5 (Permit Section V.G.6.b.5)

**BMP Title:** **INSPECTION FOLLOW-UP INCLUDING THE DETERMINATION OF WHETHER REPAIR, REPLACEMENT, OR MAINTENANCE MEASURES ARE NECESSARY AND THE IMPLEMENTATION OF THE CORRECTIVE MEASURES**

### BMP Description:

Each of the following BMP Sheets contains elements outlining procedures to follow after an inspection:

- 3c-1 Illicit Discharge Detection and Elimination
- 5c-1 Long-term Operation and Maintenance of BMPs
- 6a-1 Street Sweeping
- 6b-3 Inspection of MS4 Outfalls, Sediment Basins and Ponds
- 6b-4 Inspection of Exposed Stockpiles, Storage and Material Handling Areas

In general, an inspection record appropriate to the inspection type will be used to document each inspection's findings, after which, work orders will be prepared to address any identified maintenance needs, and completion of the work orders will be tracked. It is the responsibility of the maintenance manager for each department to determine whether general maintenance (e.g. cleaning), repair, or replacement is appropriate based on internal operational and budget criteria. An annual report summarizing the work will be submitted to the MS4 Coordinator listed below. In the event maintenance cannot be performed during the same year a defect is discovered, a repair schedule should be submitted as part of the annual report along with the reason for the delay.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

### Measurable Goals:

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of reports submitted.

### Timeline/Implementation Schedule:

2007-2011 Annually submit summary reports to responsible party listed on this BMP Sheet.

2007-2011 Annually review policy and procedures and amend if necessary.

### Specific Components and Notes:

**Resources Needed:** Staff time to process and collect annual reports.

### Responsible Party for this BMP:

**Name:** Emily Javens, PE, CPESC

**Department:** Engineering

**Phone:** (507) 387-8643

**E-mail:** [stormwater@city.mankato.mn.us](mailto:stormwater@city.mankato.mn.us)

### Recordkeeping & Reporting:

# of submitted reports (R)

2007: R= \_\_\_\_\_ 2008: R= \_\_\_\_\_

2009: R= \_\_\_\_\_ 2010: R= \_\_\_\_\_

2011: R= \_\_\_\_\_

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6b-6 (Permit Section V.G.6.b.6)

**BMP Title:** **RECORD REPORTING AND RETENTION OF ALL INSPECTIONS AND RESPONSES TO THE INSPECTIONS**

**BMP Description:**

In year one, the MS4 Coordinator listed below will meet with each department to determine the procedures that are used to document inspections and work performed as a result of the inspections. Each department will be required to submit an annual summary of inspections and work order progress.

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

**Measurable Goals:**

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of departments with reporting responsibilities.

**Timeline/Implementation Schedule:**

2007 - Meet with each department to identify the process they use to log inspections and maintenance requests.

2007 - Departments submit annual summaries to the responsible party listed on this BMP Sheet.

2008 - Determine if a standardized form would be advantageous to create.

2008-2011 – Departments continue to submit annual summaries of the work accomplished that year.

**Specific Components and Notes:**

Resources Needed: Staff time to prepare and collect annual reports.

Evaluation adjectives like “excellent, good, poor” should be avoided. Quantitative evaluations based on some measurable feature of the BMP should be employed (cy of material that escaped from the site, etc.)

**Responsible Party for this BMP:**

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Department: Engineering

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**Recordkeeping & Reporting:**

# of reporting departments (D)

2007: D = \_\_\_\_\_ 2008: D = \_\_\_\_\_

2009: D = \_\_\_\_\_ 2010: D = \_\_\_\_\_

2011: D = \_\_\_\_\_

## BMP Summary Sheet

**MS4 Name:** City of Mankato

**Minimum Control Measure:** POLLUTION PREVENTION/GOOD HOUSEKEEPING

**Unique BMP Identification Number:** 6b-7 (Permit Section V.G.6.b.7)

**BMP Title:** **EVALUATION OF INSPECTION FREQUENCY**

**BMP Description:**

The following inspection schedules will be evaluated and amended if necessary on an annual basis:

- ESC Site Inspections (BMP 4f-1)
- 20% of Outfall Inspections (BMP 6b-3)
- Stockpile Inspections (BMP 6b-4)
- Long-term Operation and Maintenance of BMPs (BMP 5c-1)
- Illicit Discharge Detection and Elimination (BMP 3c-1)

**Location(s) in SWPPP of detailed information relating to this BMP:** The information included or referenced on this Summary Sheet is intended to meet all SWPPP requirements for this BMP.

**Measurable Goals:**

The City of Mankato will measure and show effectiveness by:

- On-time completion of tasks in the implementation schedule

The City of Mankato will be able to quantify the work done on this BMP by:

- # of modifications made to inspection schedules

**Timeline/Implementation Schedule:**

2007-2011 Annually review inspection schedules listed above and amend if necessary.

**Specific Components and Notes:**

Resources Needed: Staff time to evaluate the inspection schedules.

Note: As stated in the permit, "After two years of inspections, if patterns of maintenance become apparent, the frequency of inspections may be adjusted. If maintenance or sediment removal is required as a result of each of the first two annual inspections, the frequency of inspection shall be increased to at least two (2) times annually, or more frequently as needed to prevent carry-over or washout of pollutants from the structures and maximize pollutant removal. If maintenance or sediment removal is not required as a result of both of the first two (2) annual inspections, the frequency may be reduced to once every two (2) years."

**Responsible Party for this BMP:**

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Department: Engineering

Phone: (507) 387-8643

E-mail: [stormwater@city.mankato.mn.us](mailto:stormwater@city.mankato.mn.us)

**Recordkeeping & Reporting:**

# of inspection schedule modifications (M)

2007 (Jan-Dec): M = \_\_\_\_\_

2008 (Jan-Dec): M = \_\_\_\_\_

2009 (Jan-Dec): M = \_\_\_\_\_

2010 (Jan-Dec): M = \_\_\_\_\_

2011 (Jan-Dec): M = \_\_\_\_\_